

83/NF/03

ABSTRACT

The present invention provides a device for feeding pulverized coal to a furnace, such as a drop tube furnace. The feeding system consists of a feed hopper, a pneumatic vibrator positioned on the periphery of the feeder hopper, a needle valve arrangement in the said feed hopper, a depth gauge micrometer, a distribution chamber with primary and secondary airline at the bottom of the said feed hopper. Adjusting the pressure of compressed air allows setting of the frequency of vibration of the pneumatic vibrator. The needle valve arrangement in conjunction with the vibratory hopper controls the feed rate. The rate of coal flow is measured by the depth gauge micrometer. The distribution chamber with primary and secondary airline at the bottom of the said feed hopper allows uniform mixing of air with coal before being charged into the furnace reactor.

15

20

25

30